

How Nutrition Can Help You Become a Roadmarching Machine!

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What you eat and drink before, during, and after roadmarching can have a big impact on your performance. By following four simple guidelines you can use nutrition to take your roadmarching to the next level (the following guidelines are for roadmarches lasting longer than one hour).

1. Remember your pre-roadmarch meal. Ideally you should consume a meal that contains 200 to 300 grams of carbs three to four hours prior to starting a long roadmarch. However, since most roadmarches start very early in the morning it is unrealistic to recommend you wake up at 0100 hrs just to eat and then go back to sleep.

Consuming a light meal one hour before you start roadmarching will help ensure you start the event well fueled and hydrated. Because your body takes longer to digest protein and fat, pre-event meals should be high in carbohydrates, moderate in protein, and low in fat. A good goal for your pre-event meal is to consume 100 grams of carbohydrates and 16 to 32 ounces (oz) of fluid. This is easily achieved by including carbohydrate containing beverages as part of your pre-event meal. The following is an example of a pre-event meal that is high in carbohydrates, moderate in protein, low in fat, and includes 16oz of fluid:

One large bagel (40g carbohydrates, 7g protein, 1g fat)

One tablespoon light cream cheese (1g carbohydrates, 2g protein, 3g fat)

16oz Orange Juice (63g carbohydrates, 3g protein, <1g fat)

Total Meal: 104g carbohydrates, 12g protein, 5g fat, 16oz fluid

Some Soldiers do not like to consume solid foods before roadmarching. If you prefer to only consume liquids before working out consider having a meal-replacement drink, such as Boost or Ensure prior to your event. A liquid meal may also be a good alternative for Soldiers who wake up less than an hour before roadmarching. When selecting a meal-replacement drink avoid low-carb options because they contain more fat and protein and will take longer to digest. If you opt for a meal-replacement drink as your pre-event meal, also consume 5 to 20 oz of a sports drink to increase your carbohydrate and fluid intake.

Finding the perfect pre-event meal may take some experimenting. It is highly recommended that you try out your pre-event meal a couple times before a “for record” event to be sure you do not experience gastrointestinal problems (GI).

2. Consume 30-60 grams of carbohydrate per hour if roadmarching for longer than 90 minutes. Consuming carbohydrates (carbs) during prolonged exercise spares your body’s glycogen stores, or stored energy, allowing you to go further before becoming fatigued. Consuming carbs during exercise also helps keep you in the game mentally. Depleted glycogen stores can result in decreased blood-sugar levels. When your blood-sugar is low you may be irritable, experience light headedness, or have difficulty concentrating; all of which may negatively affect your ability to maintain intensity while roadmarching.

There are several ways to intake 30-60 grams of carbohydrate. Sports drinks are a good way to intake carbs and fluid but, depending on how long your roadmarch is, it may be difficult to carry enough sports drink to meet all of your energy needs. Consuming hard candy such as Jolly Ranchers or Lemon Drops in addition to a sports

drink can help you intake at least 30 grams of carbs per hour. Energy Gels (e.g. Power Gel, Gu, Cliff Shots) are a popular way for endurance runners to intake carbs during longer races. Energy Gels come in many different flavors and you may need to try several different flavors and/or brands before finding one you enjoy/tolerate. Gels should be taken with water and you should follow the guideline below for fluid intake to prevent dehydration. When you first begin experimenting with Gels, consume only one per hour to lessen chances of having GI problems (i.e. nausea, cramping, and/or diarrhea). After making sure you can tolerate Energy Gels, consuming one to four per hour should meet your energy needs. If your goal is to consume more than one an hour you should take them separately, i.e. one every 20 minutes if consuming three Gels per hour.

Examples of foods/beverages containing 30-60 grams of carbohydrates:

- 2-4 cups of Sports Beverage
- 1-3 Energy Gels
- 6-12 Jolly Ranchers
- 8-16 Lemon Drops

3. Drink 4-8oz of fluid every 15 to 20 minutes while roadmarching. The key to staying hydrated is to start drinking before you feel thirsty. Drinking 4-8oz of fluid every 15-20 minutes from the start of your roadmarch will help prevent dehydration. When you become dehydrated it takes longer for fluid to leave your stomach, making it difficult to catch up or rehydrate. When roadmarching in hot weather and/or while wearing full combat gear you may need more than 8 oz of fluid every 15 minutes.

The average amount of sweat lost per hour is between 32 and 48 oz (4 to 6 cups), but this can increase to 64 to 96 oz (8 to 12 cups) in hot weather or during high intensity exercise. Additionally, as your physical fitness level increases you become more efficient at sweating and will have greater sweat loss during exercise. The goal for fluid intake should be to match your sweat rate; however this may be difficult due to logistics and your ability to tolerate larger quantities of fluid during exercise.

The best fluid to consume during exercise is a cool fluid that tastes good. Cool fluids leave your stomach more quickly and can help regulate body temperature, and if the beverage tastes good you are more likely to drink the recommended amount. The beverage should also be non-alcoholic (sorry guys that rules out beer). Alcohol is a diuretic, which causes you to lose more fluid than you take in, so it is also not recommended you consume alcoholic beverages when trying to rehydrate after exercise.

Caution:

Failing to adequately clean sports bottles, canteens or CamelBaks after carrying a sports drink can result in bacterial growth in the container. Before using a canteen or CamelBak to hold a sports drink consider your ability to adequately clean the container.

Tip:

Set your watch to beep every 15 to 20 minutes to remind you to drink.

4. Remember your post-roadmarch meal. Consuming adequate fluid and food immediately following a long roadmarch can help you recover more quickly. Your first goal for recovery nutrition is to rehydrate. A good rule of thumb is to consume a pint (two cups) for every pound lost during exercise. The second goal for recovery nutrition is to replenish your carbohydrate (glycogen) stores. Failure to adequately replenish your glycogen stores can result in your legs feeling stale or heavy during your next workout. Routine failure to replenish your glycogen stores can result in chronic feeling of fatigue. By consuming carbohydrate containing beverages, such as fruit juice, sports drinks, milk, or a meal replacement drink you take care of both goals at once.

The timing of your post-roadmarch meal is very important, especially if you are working out more than once a day. It takes approximately 20 hours for you to replenish your glycogen stores, but the first 60 to 90 minutes immediately following exercise are key. Just a two hour delay in consuming carbohydrate can reduce the amount of glycogen your body stores by almost 50%. A good goal is to consume 75 to 150 grams of carbohydrate (or 0.75 grams of carbohydrate per pound of body weight) within the first hour of finishing a hard workout.

Some recent research has indicated that consuming some protein after exercise in addition to carbohydrate may help replenish glycogen more quickly. A 4:1 ratio of carbohydrate to protein is recommended. When consuming protein in addition to carbohydrate as your recovery food, make sure you do not fill up on protein and fail to consume enough carbohydrates. Although there are commercial recovery drinks on the market, they are relatively expensive and do not contain anything you can not get from food. Your best bet is to save your money and eat regular food.

Protein-Carbohydrate Combination Recovery Foods

Pasta with Meat Sauce	Fruit Smoothies
Whole Grain Cereal with Milk	Fruit Juices
Cottage Cheese and Fruit	Chocolate Milk
Baked Potato	PB&J with extra J
Sports Bars (PowerBar, Kashi Go Lean Bar, etc.)	
Commercial Recover Drinks (Endurox R4, Hammer Recoverite, etc.)	
Meal Replacement Drink (Ensure, SlimFast, etc.)	

With a little bit of thought and prior planning, you can improve your roadmarching abilities through proper fueling techniques. Of course you will still have to train and put the miles in, but having a good nutrition strategy will help ensure you don't run out of gas while out on the road.

References:

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